

## **SECTION 02271 RIP-RAP**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

- A. The work specified by this section shall consist of furnishing all plant, labor, equipment, appliances, and materials and performing all operations in connection with the installation of rip-rap.

#### **1.2 RELATED DOCUMENTS**

- A. Both these specifications and the Drawings make reference to the current edition of the standard specifications of the Tennessee Department of Transportation (TDOT). Even though the weather limitations, construction methods, and materials specifications contained in the TDOT Specifications may not be explicitly repeated in these specifications, they shall, wherever applicable to the work called for by this section, be considered as implied and therefore adhered to. However, the various subsections Basis for Payment contained in the TDOT Specifications shall not be considered applicable.
- B. Drawings and general provisions of the contract, including General and Supplementary Conditions apply to this Section.

#### **1.3 SUBMITTALS**

- A. This item consists of furnishing and placing rip-rap slope protection in accordance with the drawings and specifications. .
- B. Submit shop drawings and test certifications for all products specified in this section in accordance with the requirements of General and Supplementary Conditions.

### **PART 2 - PRODUCTS**

#### **2.1 MATERIALS**

- A. The rip-rap material shall be durable and of hard natural stone, free from cracks, seams, or other defects that would tend to cause increased deterioration because of freezing and thawing or other natural causes. Rip-rap material shall be reasonably well graded from the minimum size stone. Commercially available stone being between 6"-12" in diameter. Fragments or spalls shall be used to fill the voids between the larger rocks. The inclusion of appreciable quantities of dirt, sand, clay, or rock fines will not be accepted.

### **PART 3 - EXECUTION**

#### **3.1 GENERAL**

- A. Earth surface on which rip-rap is to be placed shall be trimmed and graded so as to provide for the thickness of rip-rap shown on the drawings. Surfaces that are below grade shall be brought to grade by fillings with well-compacted materials similar to the adjacent materials.
- B. Place rip-rap to the full course thickness at one operation and in such a manner as to avoid serious displacement of the underlying materials. Deliver and spread the material so that the mass of pieces in place shall be reasonably well graded, with the larger pieces uniformly

distributed and the smaller pieces and spalls filling the voids between the larger pieces. The finished rip-rap shall be free from objectionable concentration of large or small pieces.

- C. A tolerance of +12 inches or –6 inches from slope lines and grades shown on the drawings will be permitted in the finished surface of the rip-rap, except that the extreme minus tolerance shall not be continued over an area exceeding 200 square feet.

**END OF SECTION 02271**